

MACHINERY AND SHOP EQUIPMENT

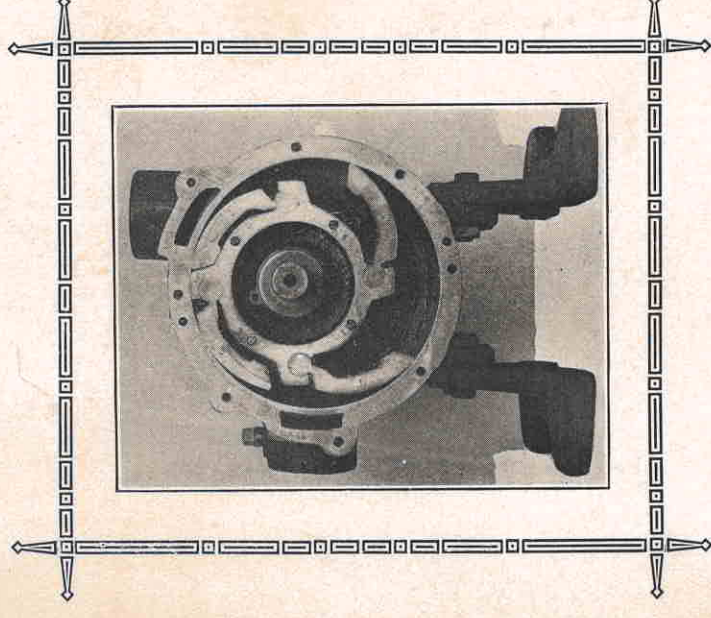
For
JEWELERS
SILVERSMITHS
DENTAL LABORATORIES
NOVELTY MAKERS
ARTISANS IN METAL, GLASS, CELLULOID,
BAKELITE and COMPOSITIONS
COLLEGES
MANUAL TRAINING SCHOOLS

COMPLETE SELF-CONTAINED MOTOR-DRIVEN OUTFITS FOR

Sandblasting	Soldering	Crushing
Polishing	Annealing	Fuel Oil Burning
Dust Collecting	Enameling	Burnishing
Drilling	Hardening	Scratch Brushing
Reaming	Turning	Stamping
Brazing	Spinning	Forming and
Cold Metal Rolling	Lapidary Work	other operations
Wire Drawing	Glass Grinding	in light metal
Melting	Forging	work.
	Refining	

for flat, circular and tubular grinding,
drilling, reaming, etc., in scientific
glassware, bottles, containers, etc.

Glass Machinery



A NEW ERA IN AIR PUMPS



LEIMAN BROS.

Rotary Positive

AIR PRESSURE BLOWERS GAS and VACUUM PUMPS

They Take Up
Their Own
Wear

Ten Sizes—

1 to 338 cu. ft. per hour
1 to 10 lbs. pressure
1 to 20 inches vacuum

Tank prevents fluctuation
of air

Weights for regulating
pressure.

Relief Valve.

OUTLET
threaded for stand-
ard iron pipe.

Enclosed stud in
piston holds wing
close to cylinder at
top, preventing loss
of air pressure.

INLET

threaded for
standard
iron pipe.

SHAFT

No compo-
sition tips to
require renewal
frequently

PISTON

Wing and cylinder surfaces
become hard and glassy-
like, insuring a perfect fit
and positive pressure or
vacuum

Bearings are
Wool Packed or
Ring Oiling.

PATENTED

Wing kept in constant contact with
cylinder by centrifugal force

Big air space resulting from small piston
and curved wings

FEW AND LARGE PARTS MEAN LONG SERVICE

THEY TAKE UP THEIR OWN WEAR

RUN CONTINUOUSLY FOR MANY YEARS WITHOUT EXPENSE

PRESSURE AND VACUUM FROM THE SAME MACHINE

BIG PRODUCTION ALLOWS ADVANCED METHODS

WITHOUT EXTRA COST

SIMPLE — NOISELESS — POWERFUL — EFFICIENT

AIR PRESSURE (UP TO 5 LBS.) and VACUUM (20 INS. MERCURY OR MORE) OR SUCTION

AIR—either pressure or suction—will do many things which have been done heretofore by mechanical means—often doing it better, more smoothly and cheaper.

High pressure (up to 5 lbs.) air or vacuum (up to 20 inches mercury) or suction will often do the work cheaper and better or cheaper and just as efficiently as extremely high pressure air or high vacuum (or suction).

Air produced by a rotary pump (one that compensates for its own wear thereby preventing leaks and consequent fluctuation) will most often deliver the air or maintain the suction or vacuum more smoothly than will the straight line piston pump, without the use of a storage tank or reservoir.

The relative amount of air handled by the rotary pump is comparatively large.

Leiman Bros. Rotary Air Pumps for high pressure air (up to 5 lbs.) (or gas) and for vacuum (up to 20 inches mercury or more) or suction, are the only pumps on the market that take up their own wear.

LEIMAN BROS., Inc.

23 WALKER STREET
NEW YORK

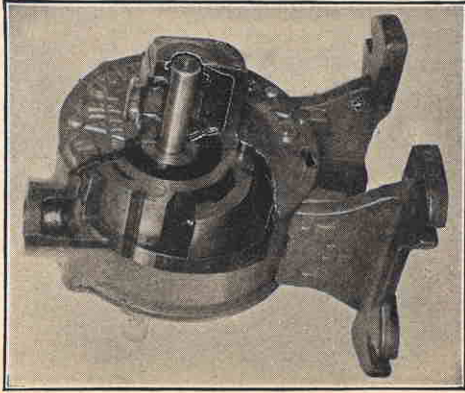
Makers of Good Machinery for 40 Years

A NEW ERA

IN AIR PUMPS

By eliminating the inlet and outlet in the cylinder surface in Leiman Bros. Rotary Positive Air Pumps we have made the greatest improvement in air pumps in a decade—the results are truly remarkable even in this—the air pump already noted for quietness of operation. No clicking of metallic parts passing an opening—just smooth, silent, efficient work.

The highly efficient ring oil bearings have been displaced by something better—the wool yarn packed bearing which holds in suspension the lubricating oil filtering it and bathing the shaft and bearing effectually preventing all wearing of parts—and one filling of oil will last a year.



WHAT 40 YEARS OF MANUFACTURING MEANS

LEIMAN BROS. have been making good machinery for 40 years and more and this means something to the buyer—It means that mistakes have been detected and corrected. It means that improvements have been suggested and adopted. It means that much that a new concern must encounter and learn has already been encountered and learned—Else 40 years in business could not have been achieved.

Leiman Bros. Rotary Positive Air Pumps have been constantly improved from the beginning—they have worked for and secured the major part of the Rotary Air Pump market and they have held it through merit alone.

That's why they are the best buy for the latest buyers as they have been for the first.

WHAT ACTUAL USERS SAY ABOUT LEIMAN BROS. ROTARY POSITIVE AIR PUMPS

26 Inch Vacuum Easy.

"It may interest you to know that the writer created and maintained 26 inches vacuum using a 5-gallon tank under far from ideal conditions."

12 Years' Use Without Expense.

"This pump has run 12 years without any upkeep expense except oil, which is a terrible record."

In Water Agitation.

"At this time we wish to pay tribute to the Leiman Bros. Air Pump. We have one in almost continuous operation (24 hours per day) since 1915—3 lbs. air pressure. The air has been used for agitation of water in the low pressure ice making system. This pump has not given one minute's trouble and all we do is give it a few drops of oil in the cylinder weekly and clean out the bearing oil wells once a year. It is as near noiseless as any pump can be and absolutely reliable in every respect."

In Glass Industry.

"We have had in continuous operation for the past six years, one of your small blowers. This blower has given us no trouble whatever. Due to this fact when our production increased and we found it necessary to purchase another blower we immediately mailed you our order, as we can find no blower on the market that will give the service obtained from yours."

For Cone Machines.

"We find the Leiman Bros. Blowers very satisfactory, having used them almost continuously 24 hours per day since they were installed and all are apparently as good as when we first bought them."

Used 350 Without a Complaint

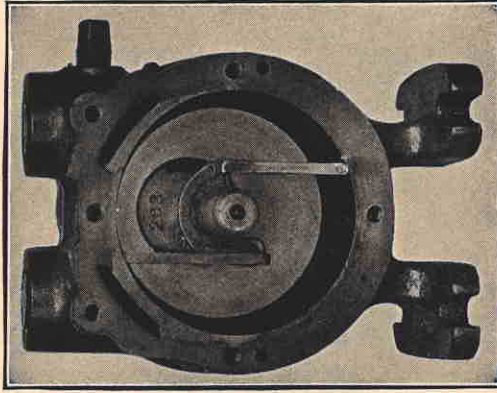
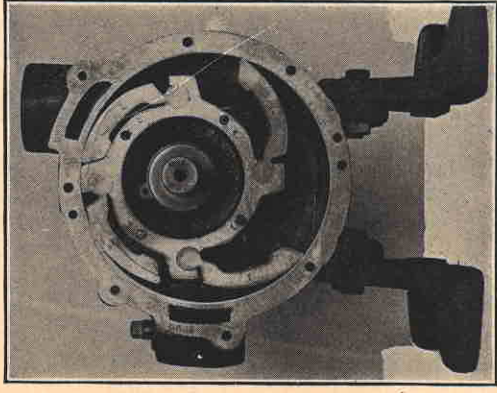
"We take pleasure in advising you that we are using your air pumps on 350 of our machines, and in no instance has this pump given a moment's trouble, in spite of the fact that in most cases our machines are installed in factories where the employees are not familiar with machinery and in consequence they are not given the proper care."

Steam Heating.

"We are using what is known as an air line system and we are using oil for fuel. The object of using a vacuum pump is to exhaust the air in the radiators and steam lines so that the steaming of the boiler will be prompt and the efficiency of the system enhanced. We are able to run on 8 to 10 pounds vacuum most of the time without difficulty."

Oil Burners.

"Having used your No. 26 pump in all our installations in connection with our oil burners for the past two years, we find them very satisfactory in every respect."



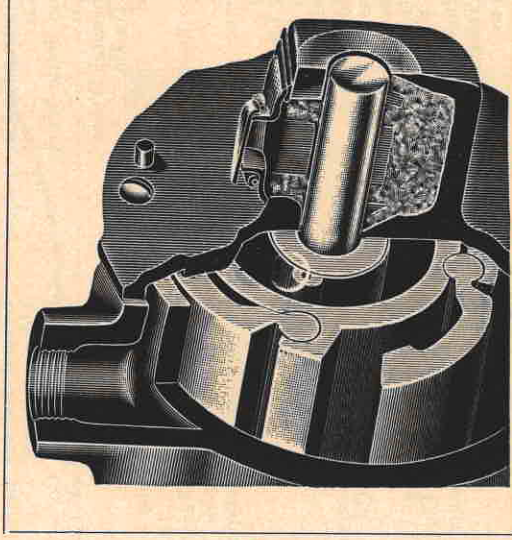
FOR LOW OR HIGH SPEED

THE wings of Leiman Bros. Rotary Air Pumps are so made as to permit of wear compensation. The air cannot get behind the wings—it must come out of the outlet.

The wings can't stick or bind but must move freely and easily.

The Big Air space is the result of using a small piston which the form of wing and its position in the piston enables us to do.

The final result is a smaller quieter and more efficient pump for AIR, GAS, PRESSURE, VACUUM.



**BUILT-IN
ONE-YEAR
LUBRICATION**

**CONTINUOUS
UNBROKEN
CYLINDER
SURFACE**

THE built-in one-year-lubrication of Leiman Bros. Rotary Positive Air Pumps is the new wool yarn packed bearing which holds in suspension enough lubricating oil for one year's service strained and purified.

The continuous unbroken cylinder surface

makes these always noiseless air and gas pumps doubly quiet. The air enters and emerges in a sidewise course through the by-pass in the cylinder head side.

This means a smooth, glassy-like cylinder surface, easy operation and saving in power.

REPRESENTATIVE USERS OF LEIMAN BROS. ROTARY POSITIVE AIR PUMPS SELECTED AT RANDOM

Westinghouse Elec. & Mfg. Co.
Emerson Elec. & Mfg. Co.
Lufkin Rule Co., Saginaw, Mich.
Standard Oil Co., New York.
General Electric Co., Lynn, Mass.
Western Electric Co.
Board of Education, Newark, N. J.
Sprague Electric Works.
Winchester Repeating Arms Co.
Remington Arms & Ammunition Co.
Whitehead & Hoag Co.
Bausch & Lomb Optical Co.
Board of Education, New York.
National Lead Co., Brooklyn.
Pittsburgh Plate Glass Co.
Victor Talking Machine Co.
American Lead Pencil Co.,
Hoboken, N. J.
Edison Chem. Works.
Addressograph Co.
Buckhannon Chemical Co.
Union Bag & Paper Co.
Libbey Glass Mfg. Co.
Cliffwood Potteries.
Massachusetts Mohair Plush Co.
Pepsodent Co.
Technical Press, N. Y.
Buescher Band Instrument Co.
Winter Bros. Co.
Koscherak Siphon Bottle Works.
Triplex Glass Co.
Mallinckrodt Chemical Works
Great A. & P. Tea Co.
Gulden Mustard.
Detroit Times.
Baltimore Copper Smelting & Refining Co.
Washington Times.
Baltimore News.
Hudson County Observers (N. J.)
Nairn Linoleum Co.
Milwaukee Sentinel.
American Gas Machine Co.
Consolidated Gas Co., N. Y.
United Gas Improvement Co.
Public Service Gas Co.
Julian Gasoline Pump.
Crawford Gasoline Pump.
N. Y. Evening Telegram.
N. Y. Daily News.
Maywood Chemical Works.
Hupp Motor Car Co.
Milwaukee Evening Wisconsin.
Art Gravure Co., N. Y.
Swift & Co.
Miller Rubber Co.
Phoenix Cheese Co.
Universal Paper Bag Co.

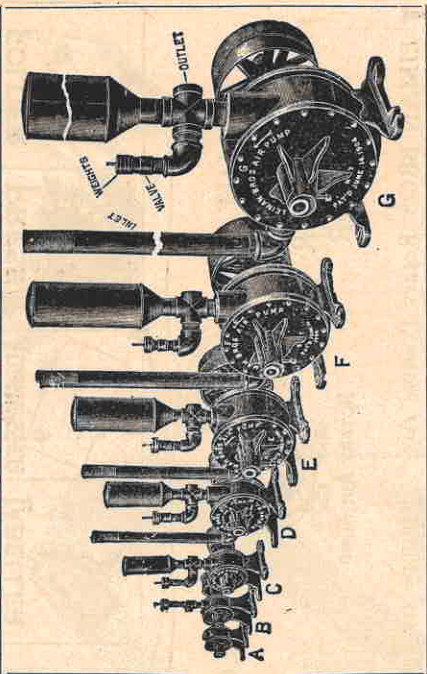
Texas Co.
Forbes Lithograph Co.
Lehn & Fink.
E. Faber Pencil Co.
Eagle Pencil Co.
Parke, Davis & Co.
Rochester American.
Globe Vacuum Bottle Co.
Crown Cork & Seal Co.
Chicago Herald-Examiner.
Cracker-Jack Co.
Frederick Stearns & Co.
St. Auld & Co.
Sheffield Farms Co.
New York American.
Grebe Radios.
International Tailoring Co.
Central Electrotape Co.
Edison Storage Battery Co.
U. S. Orenation Co.
Whitehead & Hoag Co.
Howe Baumann Balloon Co.
Chance Voight Aeroplanes.
Phillips Jones Collars.
Curtis Pub. Co., Phila.
American Medical Assn.
Penn. R. R. Co.
General Railway Signal Co.
Millers Falls Co.
Eastman Kodak Co.
Seth Thomas Clock Co.
Western Clock Co.
Syracuse University.
Metropolitan Museum of Art.
Studebaker Co.
Auto-Strip Safety Razor Co.
American Lithographic Co.
Lead Mould Electrotape Co.
Henry Bosch Co.
Manger Hotels.
Stanley Works.
Atlas Electrotape Co.
Edwin Flower Electrotape Co.
Cupples Envelope Co.
U. S. Envelope Co.
Congoleum Linoleum Co.
Carbide & Carbon Chem. Co.
Frankel Display Fixture Co.
Coleman Lamp Co.
Motometer Co.
Corning Glass Works.
Peck, Howe & Wilcox Co.
Winchester Repeating Arms Co.
Atlantic Air Craft Co.
A. G. Spalding & Bro.
Segal Police Lock.
U. S. Rubber Co.
Clark Thread Co.

A SIZE FOR EVERY USE

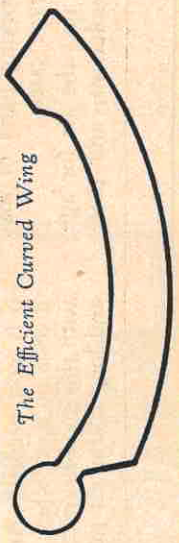
THE range of sizes we make are ten in number (only seven of these are shown here) and Experience has shown that these sizes cover almost every demand that has been or can be made for an Air Supply—positive pressure or vacuum.

Leiman Bros. Rotary Positive Air Pumps have been fitted into thousands of different nooks and crannies for every purpose under the sun all from these 10 sizes.

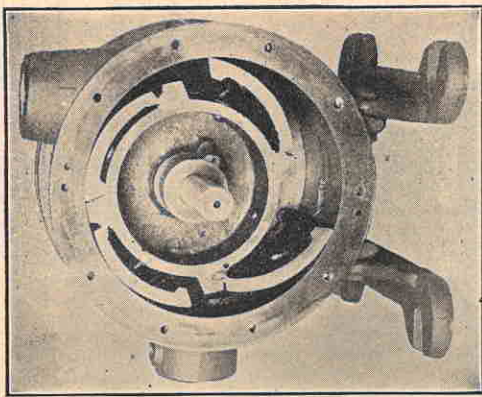
We can unhesitatingly indicate which is best for any proposition submitted to us in the form of a drawing with sizes.



The Efficient Curved Wing



THIS form of wing fits snugly around the piston to which it is hinged. When revolving the wings are extended by the rotating action of centrifugal force so that they rest at their outward edge against the interior cylinder race. They scoop up the air as they revolve. They take up their own wear. They are noiseless.

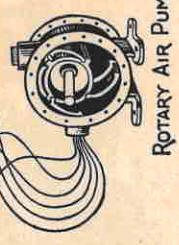


This makes the ideal Rotary machine so that Leiman Bros. Rotary Positive Air Pump takes its place as the leader being the most efficient rotary air pump on the market.

That's why the World's leading corporations with very rare exceptions use and recommend it.



THE VITAL
FACTOR
IN FEEDER
OF PAPER



LOOK FOR THE
REAL LIFE
CENTER IN
ANY FEEDER

L EIMAN BROS. Rotary Positive Air
Pumps are used by printers every-
where.

They are also used for blowing to
loosen up the sheets on a pile; and we
have strainers to prevent oil from spray-
ing on the sheets.

The printer also uses these pumps for
cooling linotype moulds and for blowing
dust out of the working parts of ma-
chines and out of type cases.

The electrotypist uses the air for agi-
tating his plating solutions, and these

pumps are found in almost every plant
doing this work.

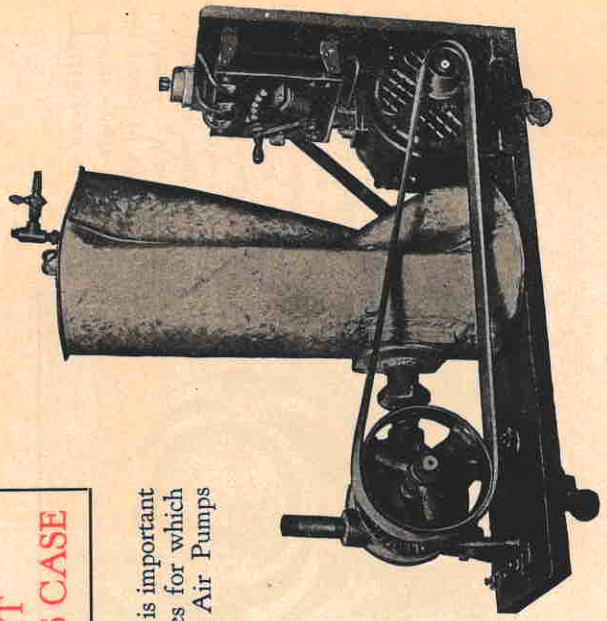
In the big shops, especially in the
newspaper plants, these pumps operate
the stereotype furnaces creating high
heats with gas or oil as fuel.

And every machine, like every man,
is benefitted by having a good heart—
one that responds when called upon for
its best efforts, not one that quits when
it is most needed. And in this instance
it costs no more when you get a machine
with this good heart—the most powerful
and long-lasting air pump made.

A COLLAPSE THAT PROVES ITS CASE

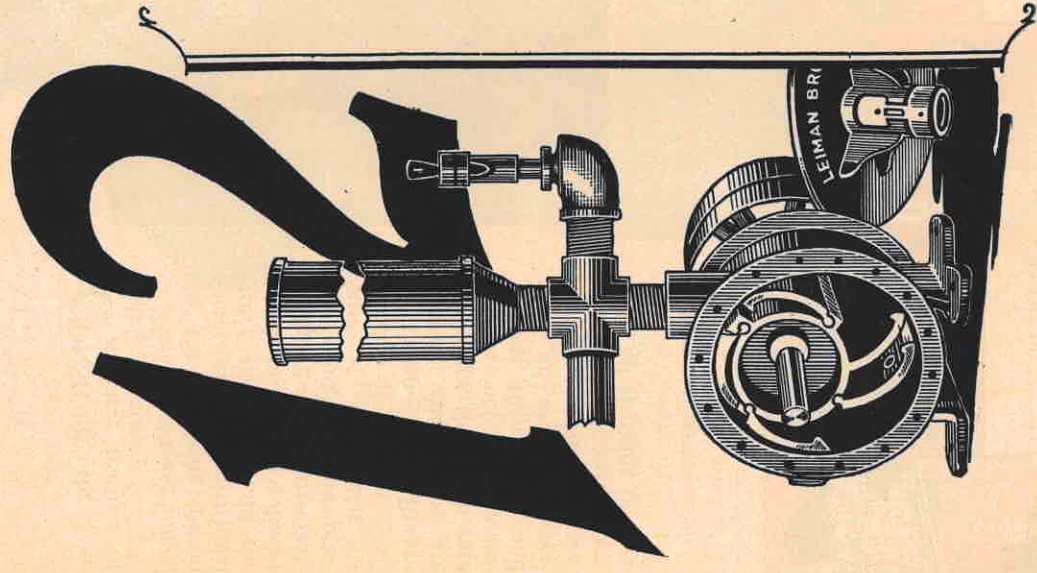
A HIGH and steady vacuum is important
for a great many purposes for which
Leiman Bros. Rotary Positive Air Pumps
are used—our illustra-
tion shows the power
of these rotary pumps
proving that their ac-
curate machining and
close fitting is the only
means that will insure
results.

40 years and more is
further proof for the
doubters.



There's a Dozen Reasons Why

You Ought To Use
LEIMAN BROS. ROTARY
POSITIVE
AIR PUMPS



- 1—They take up their own wear—no lost time.
- 2—They are noiseless—they do not divert the workers attention from production.
- 3—The air does not fluctuate—this means a continuous, even heat with gas appliances.
- 4—Bigger air space inside—results in saving of power because a small machine can be used.
- 5—The pressure or vacuum may be regulated to a nicety according to the work to be done.
- 6—A glassy-like surface on the interior of the cylinder is created by the perfect contact of the wings and cylinder—result: smooth operation and power saved.
- 7—No composition tips on the wings to loosen and cause trouble.
- 8—Centrifugal force alone holds the wings against the cylinder as they scoop up the air—no springs.
- 9—Self oiling shaft bearings.
- 10—Few working parts means little attention required.
- 11—Pressure or vacuum from the same machine without reversing rotation.
- 12—Hundreds of uses—many unsu-pected may exist in your own factory in addition to the one use you are thinking about now.

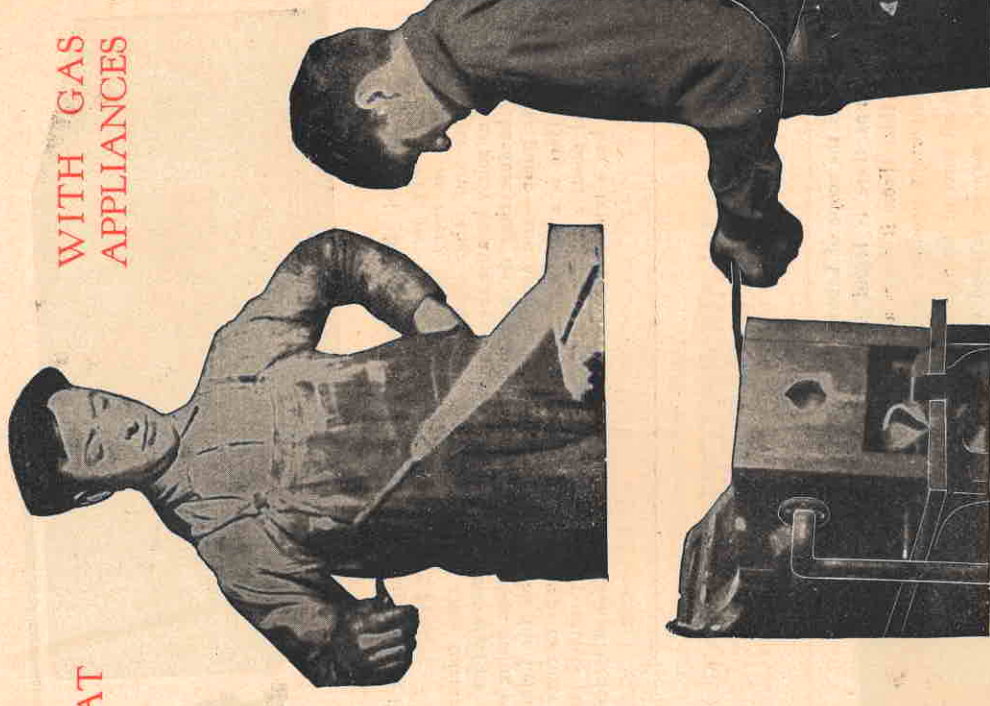
Result:—increased value of the investment.

A FEW OF THE USES

- Operating gas appliances,
oil burners,
bottle fillers,
gasoline measuring pumps,
paper feeders,
sprayers,
agitators,
gas pumping,
sand blasting,
vacuum cleaning,
many special devices.

INCREASING THE HEAT

WITH GAS
APPLIANCES



THIS is accomplished by a proper mixture of air with the gas and a non-pulsating supply of this mixture. And this is only secured by using a non-pulsating pump.

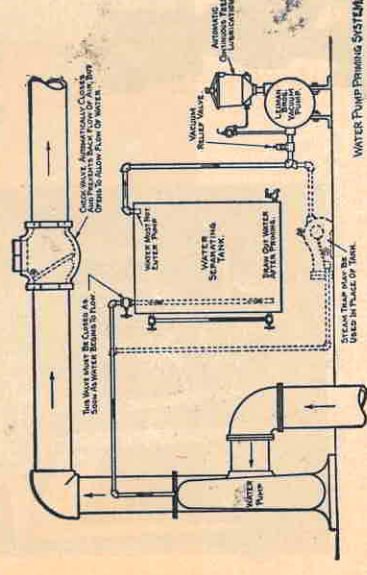
Pulsation means an alternating heating and cooling—a continuous gain and loss — It should be all gain without pulsation.

Leiman Bros. Rotary Positive Air Pumps produce this non-pulsating supply of air for gas appliances through the finely ground and accurately fitted working parts.

WATER PUMP PRIMING

WE show in our drawing how these air pumps may be used for priming water pumps making starting of the water supply positive. Either a water trap or a separating tank as shown should be used.

The high degree of positive suction created by these air pumps should be employed wherever water pumps are used—and as they are made in 10 sizes almost any sort of a pump may be primed.



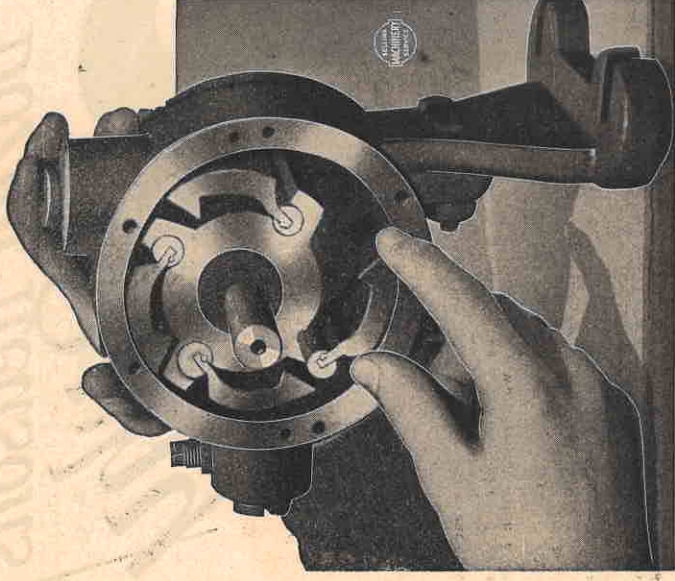
Leiman Bros. air pumps will last a lifetime free of trouble because they are built to take up their own wear.

DOES YOUR PUMP MAKE A NOISE?

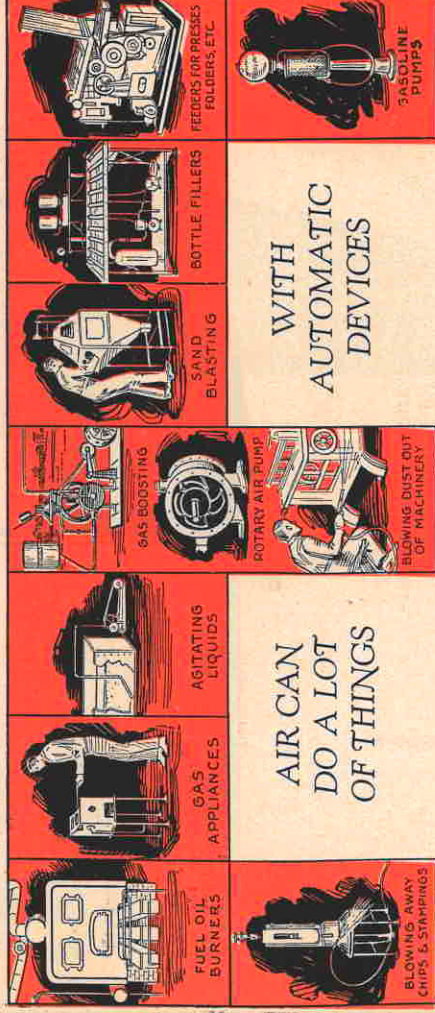
CONSIDER the constructive features of this pump.

The curved wing hinged to the revolving piston held out by centrifugal force travels around the inside race of the cylinder scooping up the air creating a high positive pressure at the outlet or vacuum at the inlet.

Leiman Bros. Rotary Positive Air Pumps are noted for their high rate of efficiency, their noiselessness, their power and their all around general worth—and that's the secret of their success in operating all air using devices.



WITH
AUTOMATIC
DEVICES

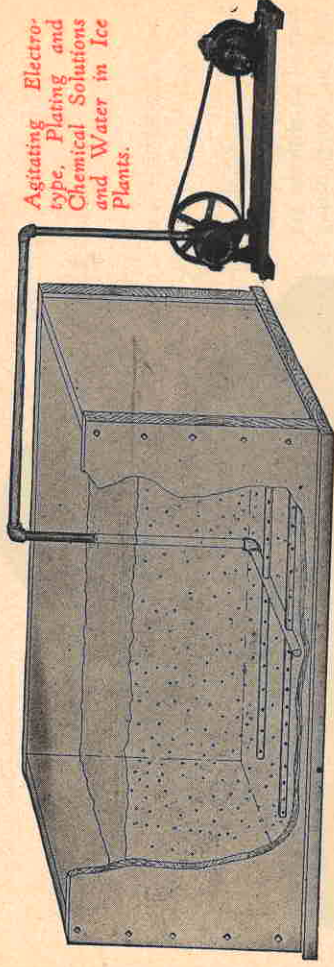


AIR CAN
DO A LOT
OF THINGS

ORDINARY, Extraordinary, most any kind of thing. The pressure and vacuum of air is so widely used now with automatic machines that we might almost say the use of air is universal.

Leiman Bros Rotary Positive Air
Pumps require no introduction to makers

Agitating Electro-type, Plating and Chemical Solutions and Water in Ice Plants.



LEIMAN BROS. Rotary Air Pumps are used by manufacturers in every line for agitating water and other liquids and solutions solely because they do it better—because they do it with a small size pump—and hence save money.

Here is a service that requires a real positive air pump because the air has a tendency to back up into

the pump unless it is close fitted and actually positive.

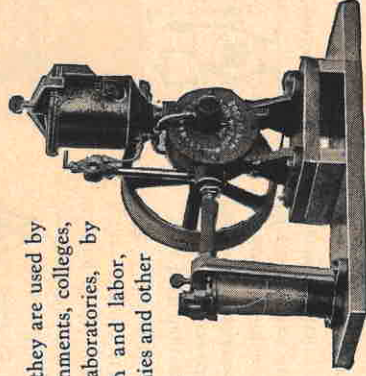
The close tolerances observed in their manufacture and the subsequent close fitting of the parts make it possible for Leiman Bros. Rotary Air Pumps to force the air into the liquids positively creating the agitation which it is designed to secure.

LABORATORY TESTING AND EXPERIMENTING

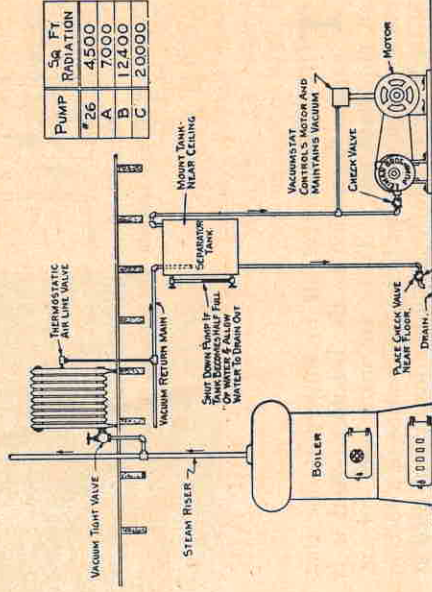
WITHIN the scope of Leiman Bros. Rotary Air Pumps there is found no more important work than this. From it comes a great deal of commercially important products and uses.

Leaks in all sorts of fittings, receptacles, bellows, balloons, etc., may be searched out by air pressure and vacuum—Air sampling in mines, tunnels and other similar places are carried on by authorities in this work and some of the most important of laboratory experiments are carried on daily by means of the positive air pressure and vacuum created by Leiman Bros. Rotary Positive Air Pumps.

For this work they are used by the leading governments, colleges, schools and laboratories, by Boards of health and labor, insurance companies and other authorities and all speak highly of their efficiency, long life and all around worth.



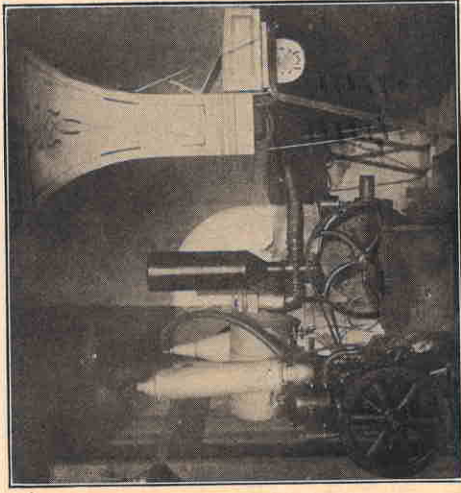
USING VACUUM FOR QUICK STEAM



THAT'S often the problem—But is no problem when rightly faced—Get the cold air out and the steam in—and there you are—SIMPLE! Then get it with Leiman Bros. Rotary Positive Air Pumps.

A size for every heating plant. Quick, efficient service that can't lay down or go out of business—and good for a lifetime.

AIR OPERATED MUSICAL INSTRUMENTS

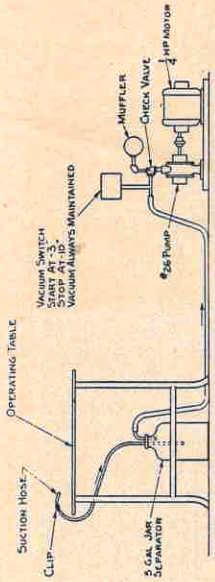


CALLIOPES and SMALL ORGANS

THIS is the service that is readily performed by a good rotary air pump as it does not require an air storage tank.

Leiman Bros. Rotary Positive Air Pumps seem to be made to order for the operation of calliopes, small organs and other air operated musical instruments.

No pulsation or fluctuation of the air supply can be permitted, hence the full steady flow of the finely ground and closely fitted parts of Leiman Bros. Rotary Air Pumps points them out as the leaders for this work.

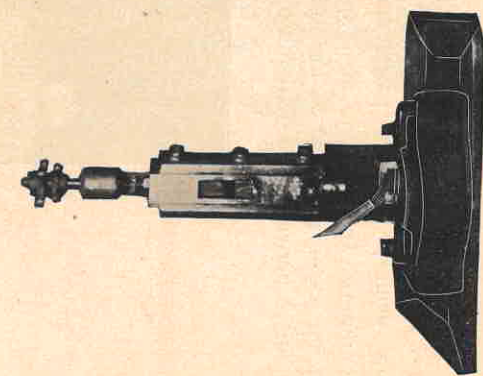


SURGERY AND THE USE OF AIR

THE relationship of air to surgery is one that carries fascination to the beholder—And it is an important one. There are many uses for air, one of the most recent being the creation of a suction at the point of a little pencil-like instrument used at operation to keep a wound clear for the more rapid work of the surgeon.

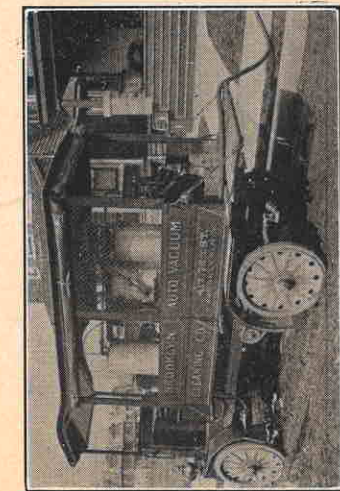
Leiman Bros. Rotary Positive Air Pumps may have many other uses in this line in the coming years because like the surgeon's other instruments they are made with great care and precision so that they may give their best service at the climax as well as when the demand is at the ebb.

BLOWING STAMPINGS, CHIPS and DUST FROM PUNCH PRESSES, DRILLS AND OTHER TOOLS



More rapid work may be done when the tool is quickly cleared of obstructions and a good strong jet of air is without doubt the best means of doing this.

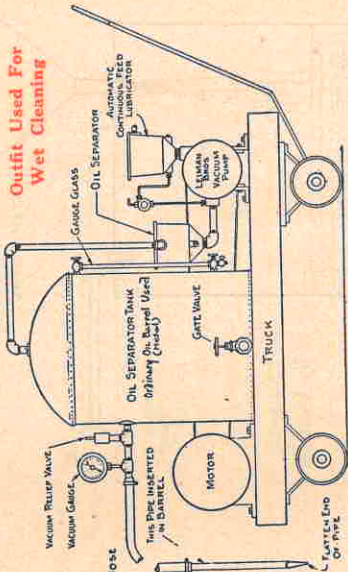
Leiman Bros. Rotary Positive Air Pumps are employed in many shops making goods of metal, wood, hard rubber, celluloid, and other materials while the air may also be used for many other purposes as well—



Commercial Vacuum Cleaner

VACUUM CLEANING WITH THE RIGHT POWER

VACUUMcleaning to be effective must be done with the right power as regards the volume of air moved and the strength of the suction or pull. Leiman Bros. Rotary Positive Air Pumps have long been used for this class of service where the cost of doing the work is noted. Whether a stationary or portable outfit is being considered, whether a domestic or industrial outfit is wanted, we have the air suction power for the work.

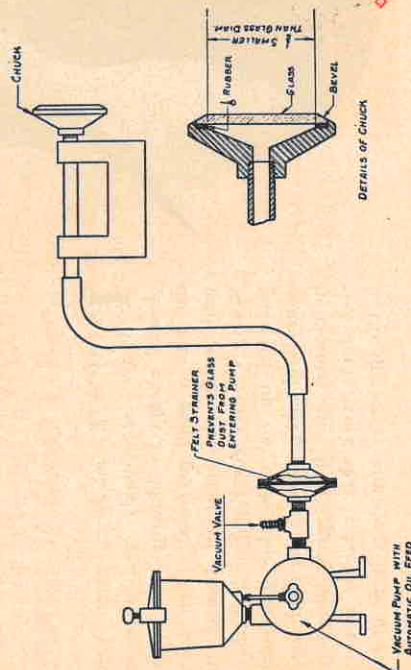


Outfit Used For Wet Cleaning

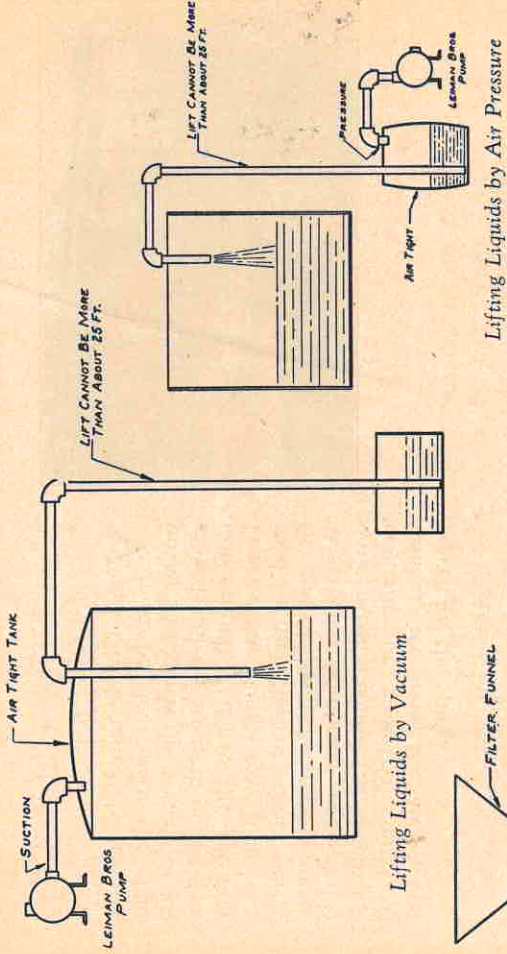
SOME of the principal oil manufacturers use the lower wet cleaning outfit for cleaning out returned oil barrels, removing the last vestige of cleaning fluid quickly, so that refilling may take place without delay.

THE SUCTION CHUCK IS A TIME SAVER

BUT only when it is reliable—Only when it can be depended upon to hold and hold with power—Here's where the close fitting parts of Leiman Bros. Rotary Air Pumps assert themselves. Here is where a few months' service will bring to the surface defects in fitting.

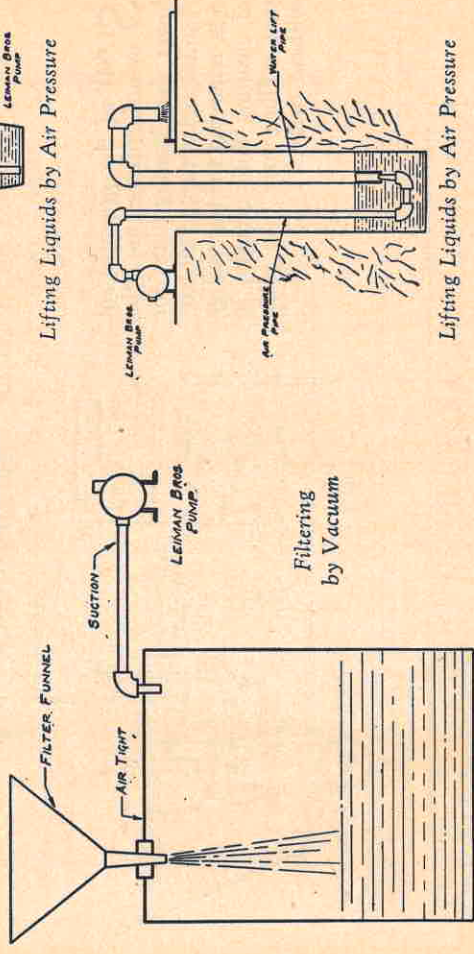


Leiman Bros. Rotary Positive Air Pumps are well able to take on this kind of work because they are built that way—to create and maintain a good, powerful, non-fluctuating vacuum which in addition may be regulated to any degree of strength desired.



Lifting Liquids by Vacuum

Lifting Liquids by Air Pressure



Filtering by Vacuum

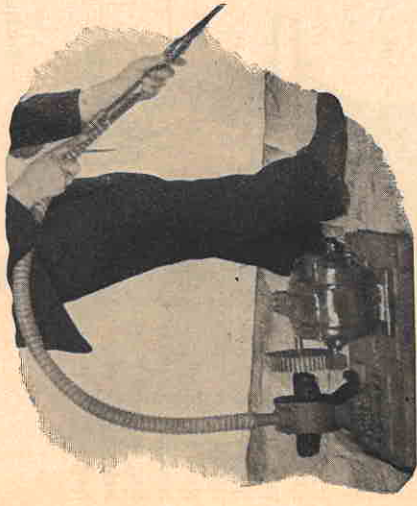
Lifting Liquids by Air Pressure

LIFTING AND FILTERING LIQUIDS

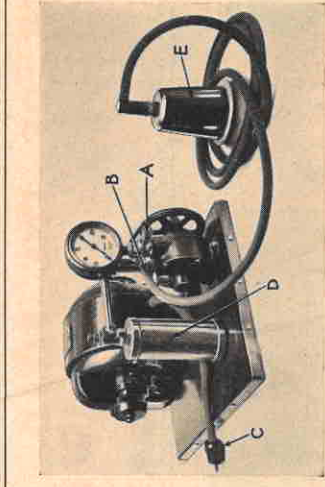
FOR all sorts of experimental and laboratory work where small quantities of water or other liquids are to be handled—with such devices as filters and similar apparatus. Leiman Bros. Rotary Positive Air Pumps may be used—and on account of the fact that they do take up their own wear they give a most highly satisfactory account of themselves. Many sizes to select from and we have separators, automatic oilers and other accessories needed.

BLOWING DUST OUT OF MACHINERY

INTRICATE machine parts cannot always be quickly and thoroughly cleaned except by blowing with a jet of air with a good pressure. Such work is well within the scope of Leiman Bros. Rotary Positive Air Pumps which may be mounted up on a movable base with a motor and taken close to the machinery to be cleaned out. It is a great labor saving tool doing work that is highly important in the upkeep of any shop, large or small.



Apparatus for Vacuum Treatment



Made by
H. N. D. Parker
Mfg. & Pub. Co.
Washington, D. C.

DRUGLESS HEALING BY MEANS OF VACUUM

LEIMAN BROS. Rotary Positive Air Pump is used in connection with the treatment known as Pneumotherapy, or the Vacuum Treatment, which is a method of healing, largely used by the Drugless School of practice.

The cup E is placed over the part of the body to be treated, and the air rapidly exhausted by the pump. The effect is to bring a much larger quantity of blood to that part under the cup. The cups vary in size from one to ten inches, there are also receivers which cover the entire leg or arm.

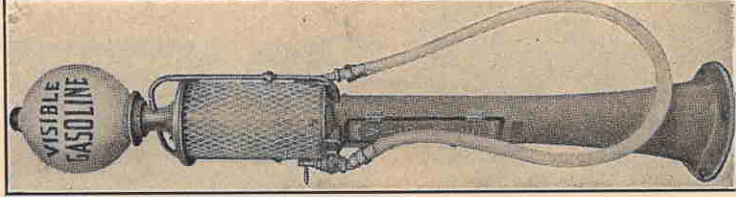
THE GASOLINE FILLING STATION GIVES QUICK ACCURATE SERVICE with the VACUUM GASOLINE FILLER

LEIMAN BROS. Rotary Positive Air Pumps have been selected for this highly important work because of the voluminous evidence of superiority in other lines of vacuum work. And naturally they have given a good account of themselves and it will be only a very short time, from all evidence available, before they will have pre-empted this important field as they have done in many others. Frequent reorders from large manufacturers is the Gilt-edge guarantee of their sterling qualities.

The curved form of wing hinged to the piston at just

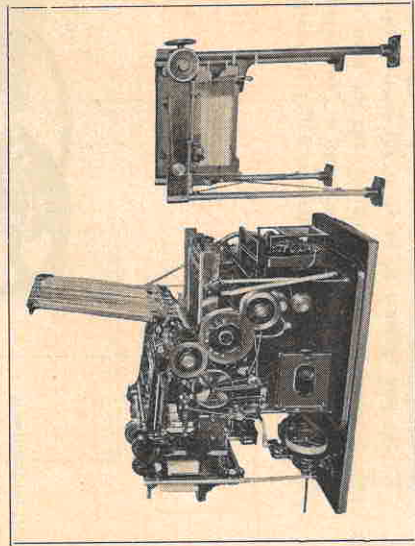
the right angle in just the right way is the result of care and observation and its successful application puzzled us for a long time—No other maker can use just this construction—Any other does not produce the 100% efficiency the users of these pumps enjoy.

We are specialists in problems involving the use of rotary air pumps and consultation and advice costs nothing—We have pointed the way to success to a great number of manufacturers of automatic devices—Why not get in touch with us.



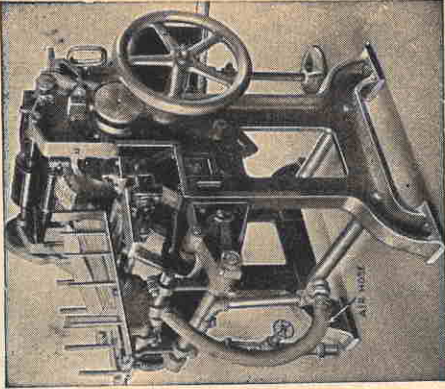
THE PICK OF THE FIELD AMONGST PAPER

(LEIMAN BROS. ROTARY POSITIVE



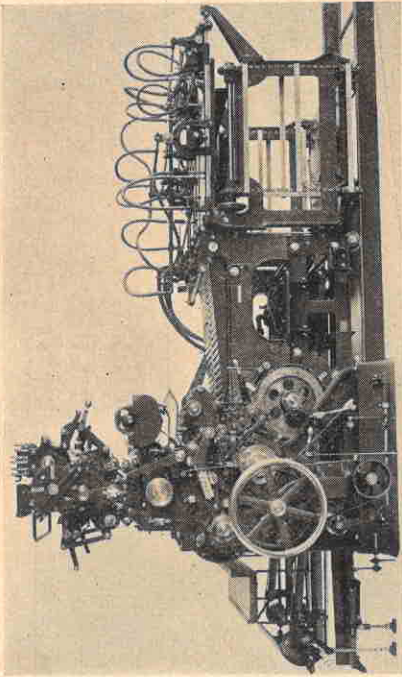
KELLY AUTOMATIC PRESS
(All Principal Cities)

Equipped with Leiman Bros. Rotary Air Pumps since first introduced.



DUVALL HIGH SPEED PRESS
Canas, Wash.

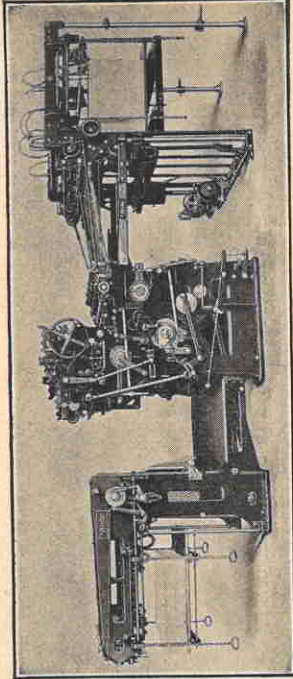
120,000 glassine bags fed and printed in 8 hours — perfect service with Leiman Bros. Rotary Air pump attached.



HARRIS AUTOMATIC PRESS
Cleveland, O.

Rapid, Reliable feeding made possible with Leiman Bros. Rotary Air Pumps.

**RAPID
POSITIVE
RELIABLE
FEEDING**



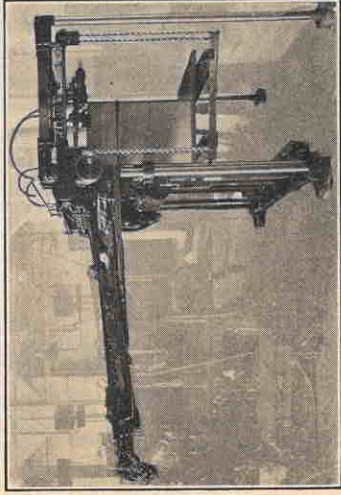
MIEHLE PILE FEEDER

Miehle Press with Pile Feeder, Chicago, Ill.



FEEDERS SAY "YES — LEIMAN IS BEST"

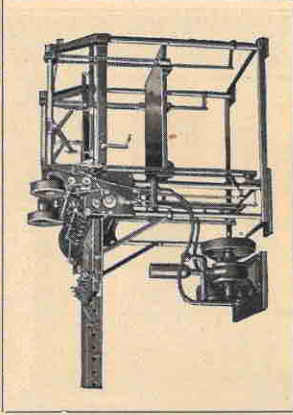
AIR PUMPS THEY MEAN)



DEXTER FEEDER

Chicago

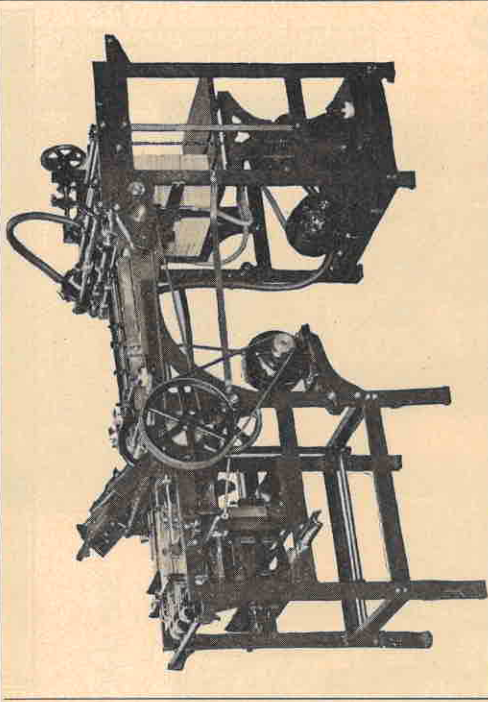
New York
Rapid, positive action makes a successful feed and one that everyone wants.



PILE FEEDER For Cleveland Folder.

Cleveland, O.

The action is pretty to look at and kind to the pocketbook.



BAUM FOLDER with LIBERTY FEEDER Philadelphia, Pa.

Simple, foolproof, versatile, speedy with Leiman Bros. Rotary Air Pumps.

Years of experience has shown the wisdom of having only the best air pumps for feeding work.

The wise buyer of a feeder, or in fact of any automatic device, makes sure of the vital element of its operation first. That's why so many are equipped with Leiman Bros. Rotary Air Pumps. They're known and they help to sell any device with which they are connected.



CROSS FEEDER Boston, Mass.

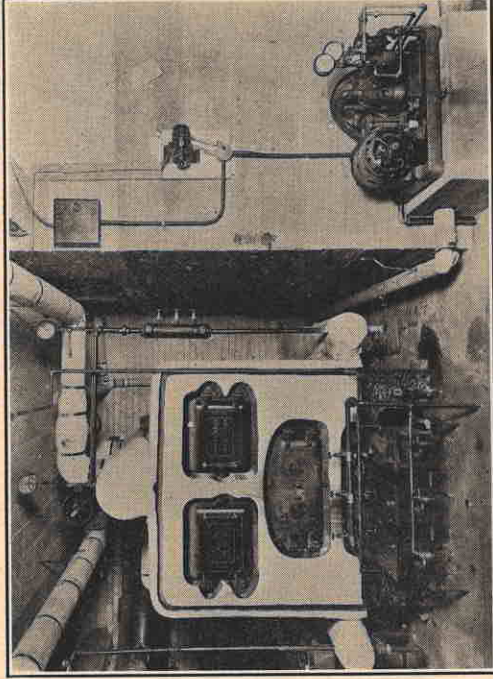
**A PENNY
SAVED
BY USING
A CHEAP
AIR PUMP
IS SPENT
OVER AND
OVER AGAIN
IN
AFTER SERVICE**

**LEIMAN BROS.
AIR PUMPS**

**TAKE UP
THEIR OWN
WEAR**



TO KNOW THE GOOD OIL LOOK FOR LEIMAN BROS.



SHERMAN — Worcester, Mass.

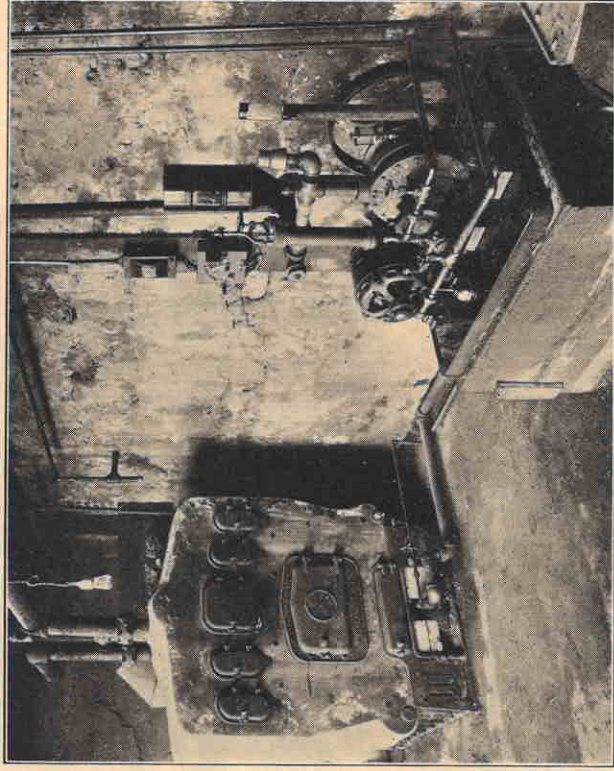
THE POWER BEHIND THE BURNER

L EIMAN BROS. Rotary Positive Air Pumps insure proper atomization and combustion. A clean, sure, dependable fire.

Steady service can only be maintained when the air pump, that really does the important work, can maintain itself.

These air pumps are wear-compensating which also insure noiselessness.

These are the important things in an oil burner—here you get them because the form of construction of Leiman Bros. Rotary Positive Air Pumps is designed for just these things.

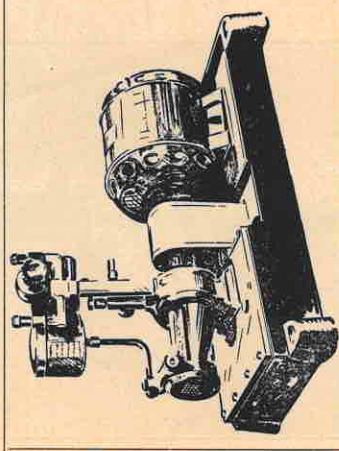


BEST —N. Y. City

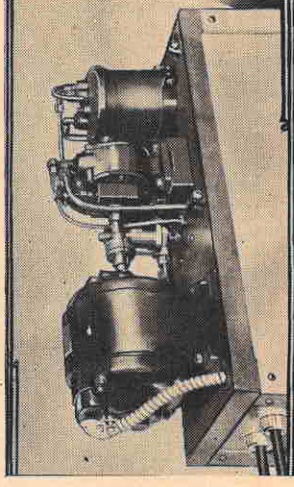
ACTUALLY QUIET

IT is no mere figure of speech to say that Leiman Bros. Rotary Positive Air Pumps are quiet. This is the real outstanding reason for their selection by those to whom cost is not the whole thing. And they cost no more—even less.

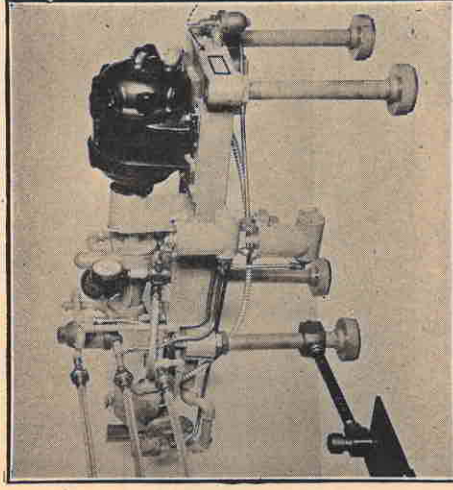
BURNERS ROTARY POSITIVE AIR PUMPS



Hyco-Oil Fire Corp., Oakland, Calif.



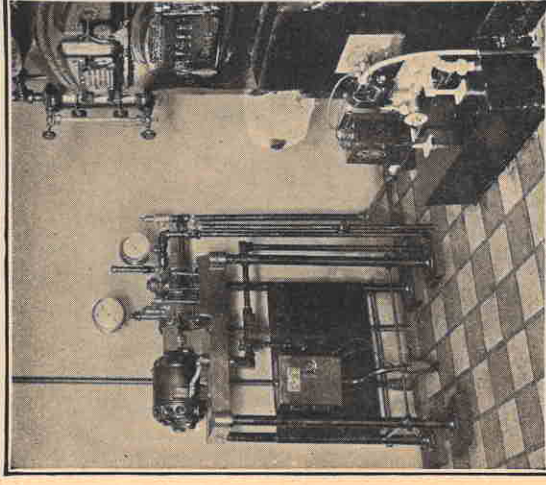
Dual Automatic. Seattle, Wash.



Corwin, Newark, N. J.

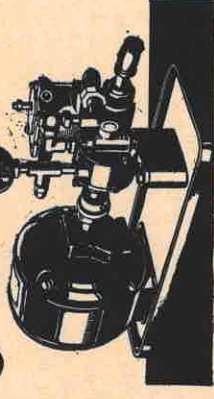
REAL WORKING OIL BURNER OUTFITS

THAT'S the kind of outfit that uses Leiman Bros. Rotary Positive Air Pumps—not necessarily the cheapest—yet they often are the lowest in first cost and in upkeep—Domestic and Industrial.

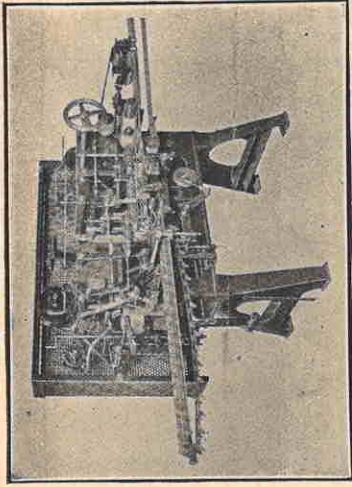


Ballard, Newark, N. J.

Pascoe
QUIET OIL BURNER

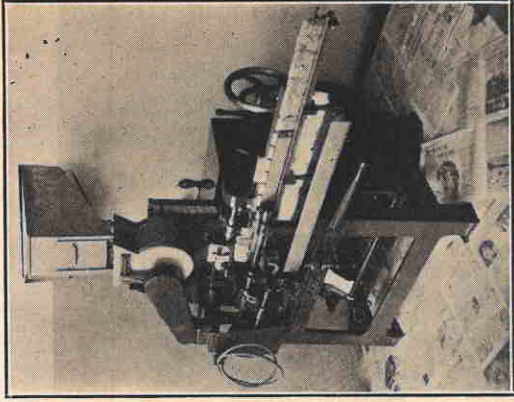


Pascoe, Chicago



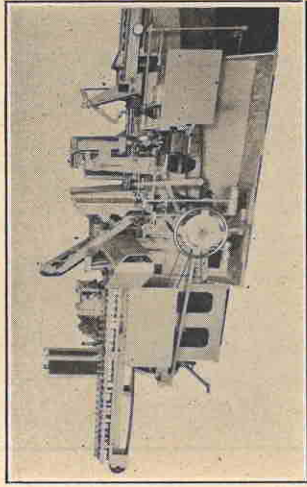
AUTOMATIC PACKAGE WRAPPER

(Packaging Machinery Co., Springfield, Mass.)



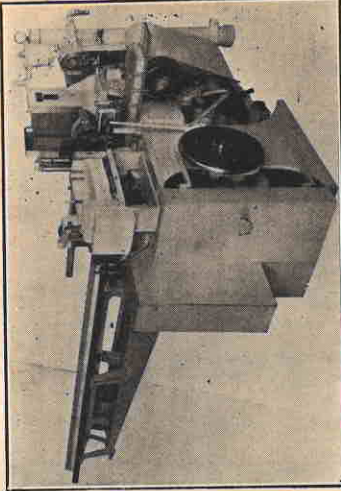
AUTOMATIC BAG FILLER

Filling Peanuts, Candies, etc.
(Cartoning Machinery Corp., Newport, R. I.)



AUTOMATIC BOTTLE WRAPPER

Wrapping Listerine
(F. B. Redington Co., Chicago, Ill.)



AUTOMATIC PACKAGE WRAPPER

Wrapping Oleomargarine
(F. B. Redington Co., Chicago, Ill.)

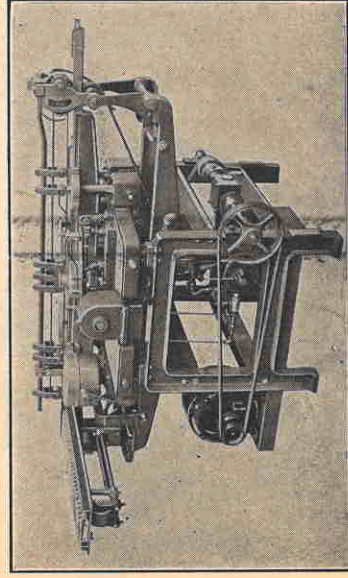
AUTOMATIC PACKAGE WRAPPERS AND BAG FILLERS

ALL air using devices for handling paper, cardboard, metal foil and other materials must have a positive means of pickup and handling and this is only possible where the air pump used is closely fitted with truly ground parts.

Leiman Bros. Rotary Positive Air Pumps are the only pumps that **TAKE UP THEIR OWN WEAR**. A powerful, dependable suction that will lift and carry anything—pieces of all shapes, sizes and weights to be handled.

24 HOUR SERVICE — 7 DAYS A WEEK

Only possible with machines that take up their own wear. Whether you want this kind of service or not you do want the best pump that money will buy.

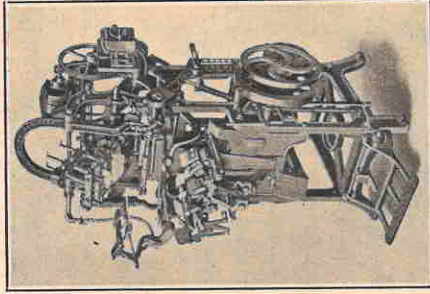


CIGAR BANDING MACHINE

(International Banding Machine Co., N. Y. City.)

HERE is a service that carries a challenge—because it must be rapid, continuous and thorough.

Leiman Bros. Rotary Positive Air Pumps with their finely ground and accurately fitted parts are able to produce and maintain for long periods the steady air pressure and vacuum which alone can do this work.

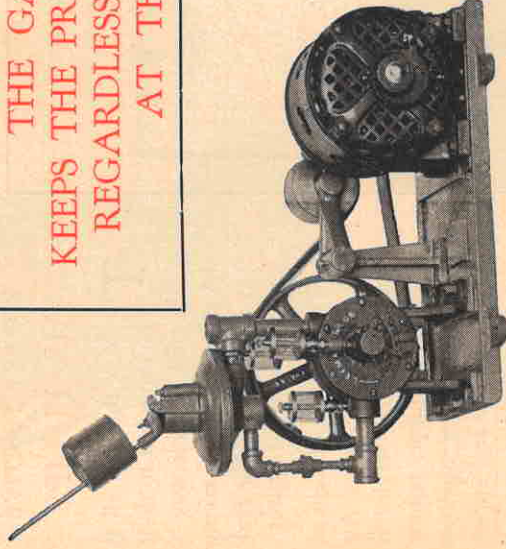


**COMBINATION LABELLING
AND FOILING MACHINE
FOR BOTTLES**

(Edw. Er mold Co., N. Y. City.)

Your bottle is foiled and labeled clean and neat, the original luster of the lithographers ink on the label is retained and the brilliancy of the foil is most striking, until the perfection of the Er mold Foiling and Labeling machine with the Leiman Bros. Rotary Positive Air Pump, bottles had to be hand foiled after being machine labeled, a tedious process and without any uniformity in appearance.

THE GAS BOOSTER KEEPS THE PRESSURE CONSTANT REGARDLESS OF THE DEMAND AT THE OUTLET



THROUGHOUT the length and breadth of the area of the piping system there are varying demands. Here one burner is turned on and there three are shut off. And this continues on varying with the hours of day and night.

Always the gas booster with its by-pass and pressure regulator may be depended upon to keep the pressure constant notwithstanding this fluctuation in demand.

Leiman Bros. Rotary Positive Air Pumps are furnished for handling non-corrosive gases, as well as air and will give a lifetime of service.

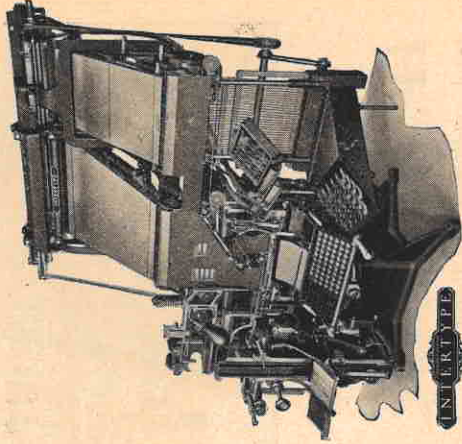


PRINTERS SAVE MONEY with INTERTYPE TYPESETTING MACHINES



LEIMAN BROS. Rotary Positive Air Pumps are used with the Intertype for cooling the type casting moulds. No other system of cooling has ever been devised that will handle this cooling problem so satisfactorily—it makes rapid work without overheating possible—it insures better slugs—it is less costly—it is neater and cleaner.

This is only one of the many standardized features of the Intertype—these all prevent obsolescence of equipment—because these standardized features and



INTERTYPE

The Intertype Corporation, New York.

others as they come are always applicable to all existing models.

THIS TEXTILE EMULSION SPRAYER

Wanted to Spray Right, So They Selected

LEIMAN BROS.

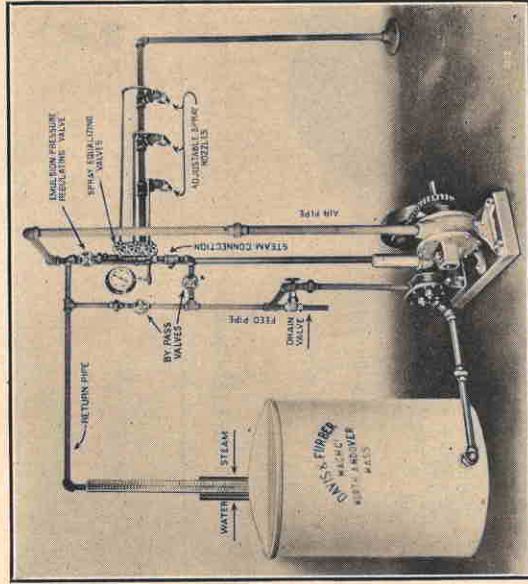
ROTARY POSITIVE

AIR PUMPS

TO do a thing at all is one thing but to do it in the best possible way—the efficient money saving way is the goal of the real, serviceable manufacturer.

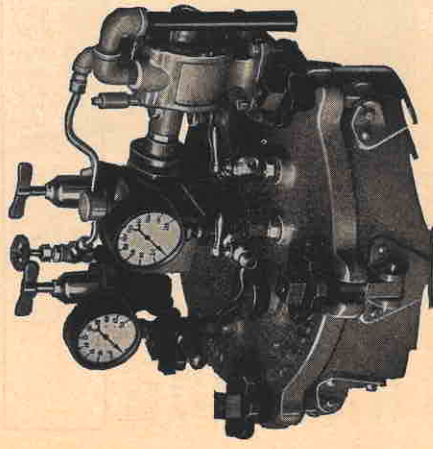
The selection of Leiman Bros. Rotary Positive Air Pumps for this service is another eloquent tribute to their sterling qualities so well known and appreciated by makers of all sorts of automatic machinery.

No device is automatic, unless it will actually do its work by itself, without excessive attention. That's where our pumps come in strong.



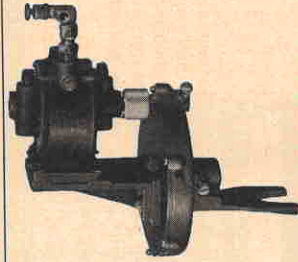
Davis & Furbur Machine Co., North Andover, Mass.

WHEREVER PAINTING
IS DONE,
SPRAY PAINTING
with the Mechanical
AGITATOR
IS THE MONEY SAVER



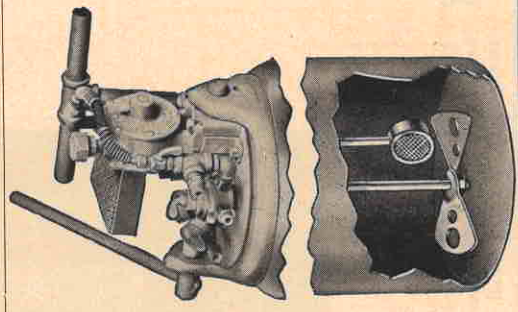
THE BINKS

(Binks Spray Equipment Co., Chicago, Ill.)



THE DEVILBISS

(Devilbiss Co., Toledo, O.)



LEIMAN
BROS.

AIR

PUMPS

As

AIR

MOTORS

THE SPRACO

(Spraco Painting Equip. Co., Somerville, Mass.)

THE PAASCHE

(Paasche Air Brush Co., Chicago, Ill.)

MECHANICAL AGITATORS FOR SPRAY PAINTERS

LEIMAN BROS. Rotary Positive Air Pumps are widely used as air motors transmitting mechanical power in this way for stirring paint in containers so that they create a fire safe feature and a most convenient means of power applica-

tion where compressed air is already available. Wherever painting is done with an air gun one of these automatic stirring devices will be found of great value. Most makers of these stirrers use these highly efficient air pumps as air motors.

THE GRAMMER PARAFFINE PROCESS ON ALL PRINTING PRESSES PREVENTS OFFSETS

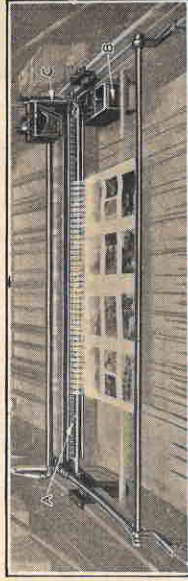
THE Grammer method embodies an automatic machine applicable to most any type of printing press, by which paraffine (electrically heated to a liquid) is

are chilled before coming in contact with the paper; their action is mechanical, holding the sheets apart while the ink is drying. The amount of paraffine needed is extremely small, one ounce being sufficient to prevent all offset on four hundred square yards of four-color work, piled ten thousand sheets to the truck. The amount of paraffine being so small, it entirely disappears on subsequent handling of the paper.

The operating cost of this process is very low, amounting to less than eight cents per hour on a 48" McKee or a No. 5/0 Miehle.

This process is in successful operation on all classes of stock from glassine paper to carton board.

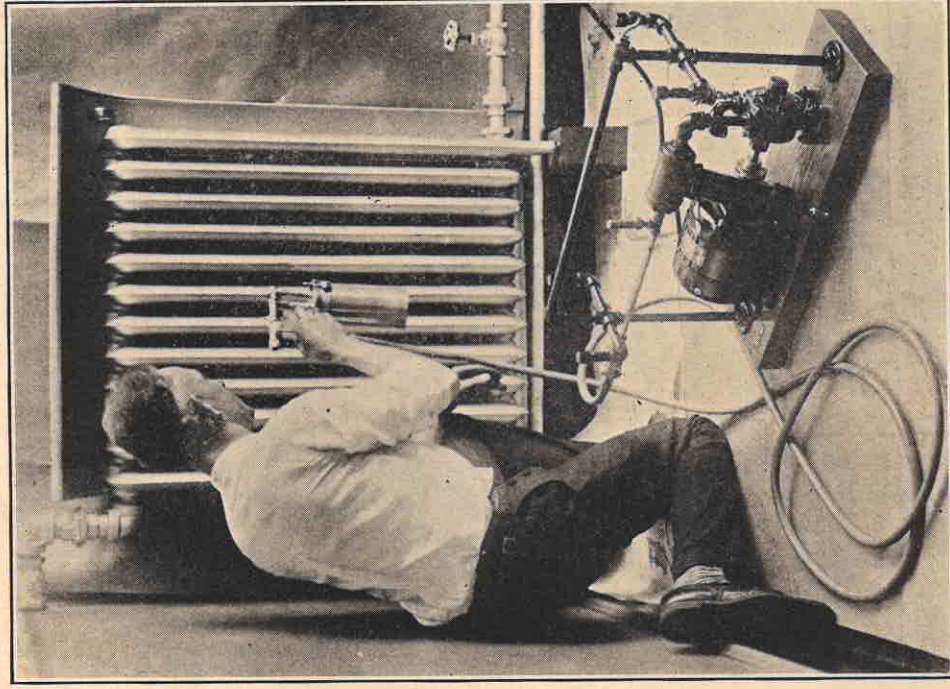
LEIMAN BROS.
ROTARY POSITIVE AIR PUMPS
USED WITH THE
GRAMMER PROCESS



THE GRAMMER PARAFFINE SPRAYER

(Made by Acme Gear Co., Phila., Pa.)

sprayed on the printed sheet or web after printing and before piling or folding. This treatment should not be considered as a film laid over the surface, but rather as innumerable, minute wax particles which



The Willard C. Beach Spray Outfit in Action
(Willard C. Beach Air Brush Co., Harrison, N. J.)

ATOMIZING AND SPRAYING WITH NEW PEP

WHY do Leiman Bros. Rotary Positive Air Pumps do it so well. First of all they have very closely fitted parts which means positive pressure and plenty of it.

Then the form of construction used enabling them to take up their own wear. Keeps them fit and working late in life.

Here you have speed and efficiency and that's why atomizing and spraying is lining up with other lines of work in using these pumps that have no ills.

The picture shows the Willard C. Beach portable painting unit for radiators, floors, wicker furniture, automobiles, etc.

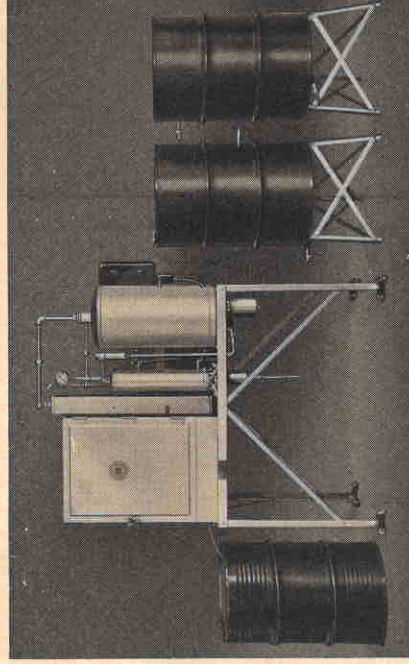
THE SKINNER OIL RECLAIMER SAVES MONEY FOR AUTOMOBILE OPERATORS

THE Skinner Oil Reclaimer, developed by the Skinner Automotive Device Co., Inc., of Detroit, Michigan, is a small oil refinery, employing the same scientific principles used in distilling off gasoline in the larger crude oil plants. It also embodies a filtration plant in which dirt and sediment are removed.

The Reclaimer, which is shown in the accompanying cut, operates automatically, requiring no watching, and consequently renews oil at a fraction of its original cost. A high vacuum is maintained in the machine with Leiman Bros. Rotary Positive Air Pumps, reducing the temperature required to distill off gasoline and other liquid impurities, and providing a means of drawing in the diluted oil.

A large number of nationally-known fleet operators, among them the Detroit Edison Company, Goodyear Tire & Rubber Company, Firestone Tire & Rubber Company, and Pickwick Stages System, have been using Skinner Reclaimers in their garages for some time, reporting them an excellent investment.

A Junior Model, operating on the same principle as the machine illustrated is now available for those fleet operators whose drainings are less. It is anticipated, therefore, that it will not be long before the majority of truck and bus fleet owners throughout the country will take advantage of this means of eliminating waste, and reducing their operating costs.



LEIMAN
BROS.

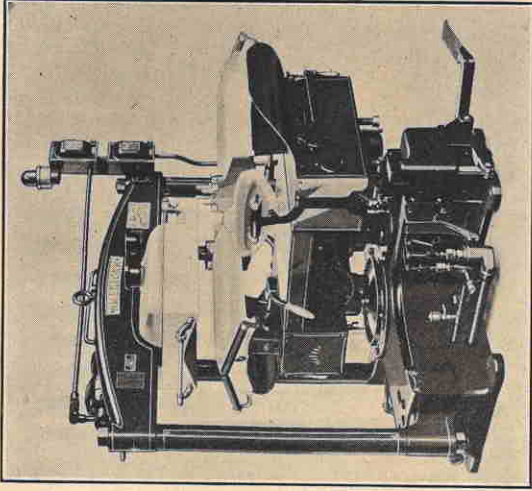
THE American System is constructed on entirely new principles, and has features impossible to obtain on any other type of machine.

This press has two padded beds brought in contact with a concave steam chest, which prevents distortion of the lines of the shirt. It will fit the wearer as when new. Another feature permits collar attached shirts to be handled the same as negligee shirts.

By means of two small irons, which slide into position when the pressure is applied, the triangular portion of the shirt behind the neckband is ironed. No other machine possesses this feature.

This machine has a yoke clamping device,

SHIRT BOSOM PRESS
American Laundry Machinery Co., Cinn., O.



which not only holds the yoke in place, but irons it as well, without any extra labor on the part of the operator. The yoke is pressed against an ironing plate, heated by electricity and controlled by a rheostat. This feature alone saves one operation in ironing a shirt, and is found only on this machine.

A small motor mounted on the cross-member of the machine, and connected to Leiman Bros. Air Pump, keeps excessive moisture from around the neckband while the shirt is being ironed, and also keeps the padding dry around the neckband. This feature is very necessary in obtaining a high-quality shirt.

AIR PUMPS IN THE LAUNDRY

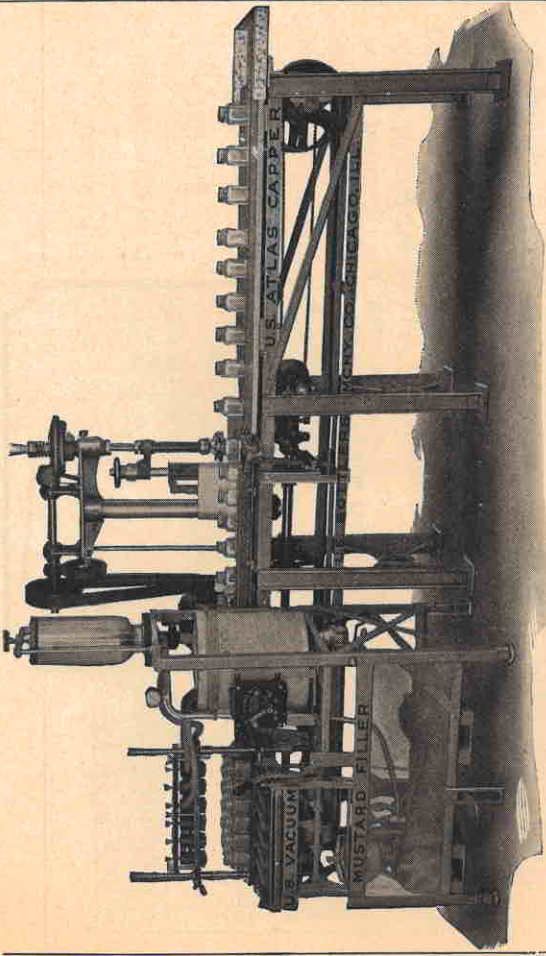
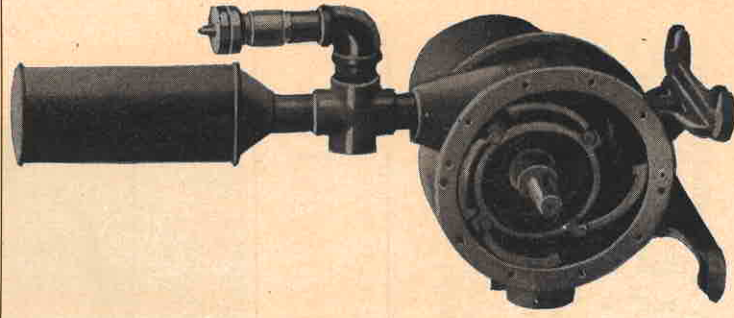
BUILT LIKE AN AUTOMOBILE MOTOR

Parts Ground and Fitted

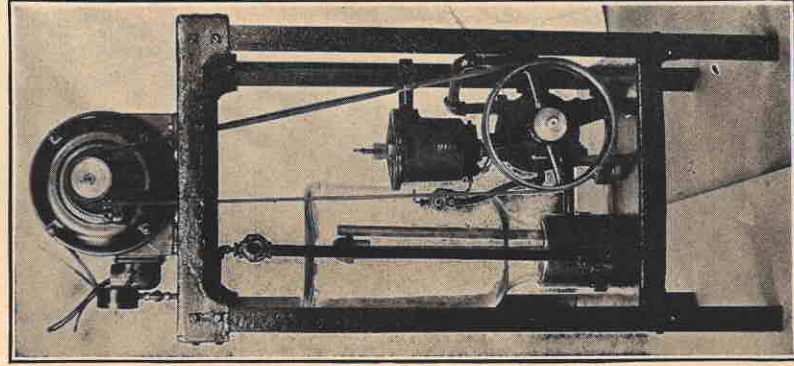
THAT'S how efficiency is secured. It means a small, efficient, noiseless air pump for a job that now requires a large machine of the old type. The relative cost to produce is greater but increased production holds the cost to the user down.

Wherever air is required at a pressure or vacuum—most likely Leiman Bros. Rotary Positive Air Pumps will be found to represent the ultimate possibility—the surprise racehorse for the trip.

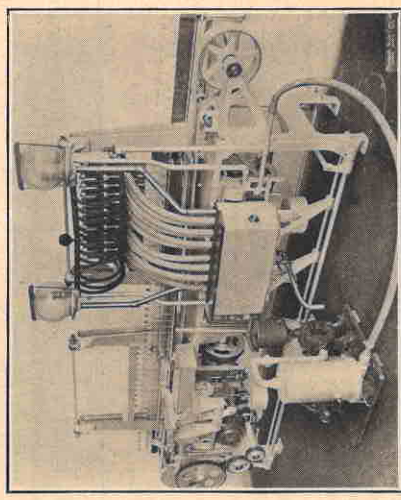
Increased efficiency through mass production, improvements in construction gives you this, the latest and most up to the minute air pump for vacuum or pressure at less cost than you expect—and a smaller, more compact machine than you expect.



THE IDEAL BOTTLE FILLER & CAPPER U. S. Bottlers Machinery Co., Chicago, Ill.



Pneumatic Scale Corp., Norfolk Downs, Mass.



VACUUM BOTTLE FILLERS MUST HAVE A VACUUM

A MODERN method of filling bottles of any size or shape with any kind of liquids—Fast and reliable, rejecting broken or cracked bottles. Most filling machines are using Leiman Bros. Rotary Positive Air Pumps already as they assure a real, positive and steady vacuum which may be regulated to a nicety—The machines are self-lubricating and hence require very little attention.

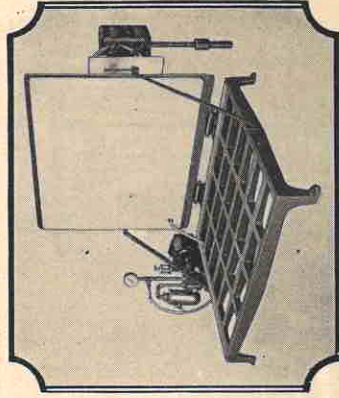
The Filling Machine works steadily, rapidly and efficiently and every sort of food and drink passes through them. Thousands and hundreds of thousands of bottles of catsup, cologne, ink, vinegar and what not are bottled daily by these most wonderful devices.

THE INTERNATIONAL
(International Filler Corp., Petersburg, Va.)



The WESEL Vacuum Printing Frame

For Photo-
Engravers
and Photo-
Lithographers



The Wesel Vacuum Printing Frame
F. Wesel Mfg. Co. - Scranton, Pa.

FOR YEARS, photo-engravers and photo-lithographers have desired a simple printing frame of the vacuum type which could be operated quickly and easily without loss of time. Yet, they desired efficient results as well. This frame meets these requisites.

This is the most unique vacuum printing frame ever devised the photo-engraver and the photo-lithographer. It is so ingeniously constructed that a plate may be instantly placed in position for printing. No time is required for adjusting, clamping, fastening or other mechanical manipulation. It is the only vacuum frame of its kind.

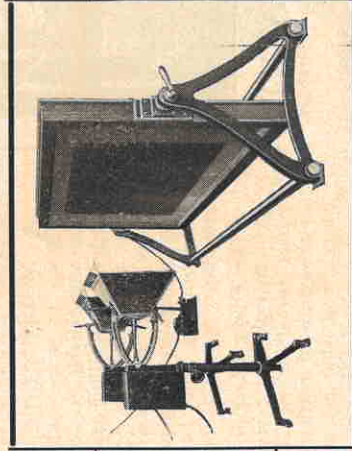
Leiman Bros. Vacuum Pumps are used with these Vacuum Printing frames because they, too, are simple—lending their high Vacuum, creating capabilities to make the combination invincible.

VACUUM PRINTING FRAME for PHOTO REPRODUCTION PROCESSES

THESE VACUUM FRAMES are used in connection with photo reproduction processes. Photo negatives are placed along with the photo cloth in this frame against the plate glass. A heavy rubber blanket in the back of the frame completely covers the glass as well as the photo cloth while the clamps around the edge of the vacuum frame hold the edges of the rubber mat air tight against the plate glass. You will note in the illustration a small valve in the rubber mat to which the hose running from the vacuum pump is attached. The Leiman Bros. Rotary Positive Air Pump is then put in operation thereby withdrawing all the air that might be left underneath the rubber mat, and creating a perfect contact of the negative against the unexposed cloth.

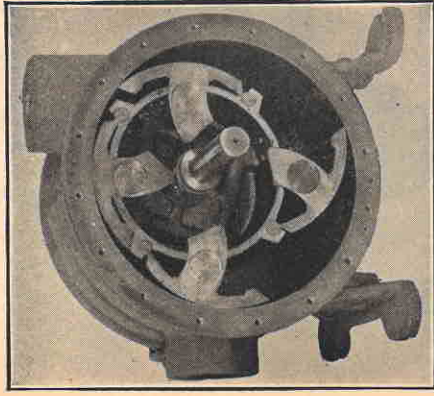
Leiman Bros.
Rotary
AIR PUMPS

Create a
Perfect
Holding Contact



Chas. Bruning Co., New York

POSITIVE PRESSURE AND VACUUM WHETHER NEW OR OLD



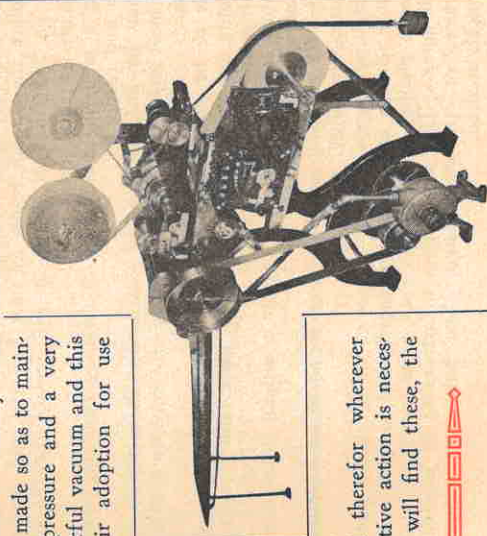
THIS kind of service can only be maintained by a rotary air pump made with this end in view. See the various air pumps after a short length of service and then judge for yourself the effect on positive pressure and vacuum of the curved wings of Leiman Bros. Rotary Air Pumps hinged to the revolving piston turning at a speed to extend these wings out against the cylinder. Consider how these wings, as they scoop up the air, must positively and without leakage or fluctuation, deliver this air at the outlet or draw in the air at the inlet at a high degree of suction.

Consider how no other form of construction has this same positive effect and you will then realize why Leiman Bros. Rotary Air Pumps have captured the market for fine pumps and have held it against all comers since the beginning.

ADDRESSING AND MAILING WITH THE HELP OF AIR

LEIMAN BROS. Rotary Air Pumps are made so as to maintain a steady pressure and a very even, yet powerful vacuum and this has led to their adoption for use with mailing and addressing machines.

The finely finished and closely fitted parts makes them reliable in action and therefor wherever speed and positive action is necessary here you will find these, the

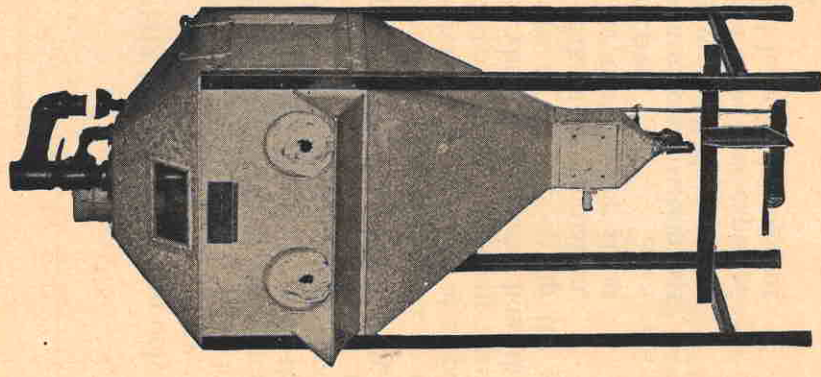


only pumps that take up their own wear.

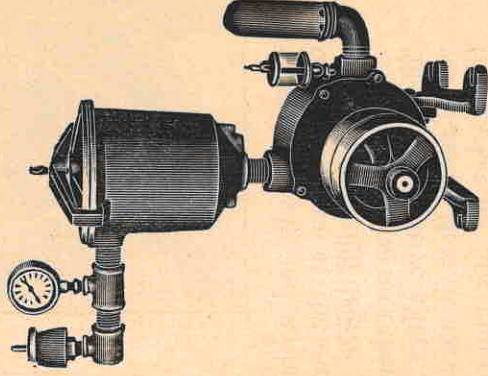
There are very small ones to lift very small pieces of paper and there are great, large ones for heavy book covers or entire books.

A good machine with a reputation to sustain, never jeopardizes its good name by use of an inferior pump.

The Pollard Alling Mfg. Co.
New York



HERE'S
A
REAL
LABOR
SAVER



LEIMAN BROS.
PATENTED

SAND BLAST

For Manufacturers of Goods in Metal, Glass, Celluloid, Rubber, Wood and other materials

WILL replace the scratch brush for mat finishing and similar effects on all classes of goods—it will replace the use of disagreeable acids for this work.

It furnishes a modern, cleanly way of cleaning moulding sand from patterns and castings.

Finishes may be fine, medium or coarse on all materials as desired—but, most important, it will always be uniform—no streaky, uneven results.

Any article to be plated should be sand blasted first—it will result in a more permanent plate, a quicker plate, and a saving of time in plating and a saving of current.

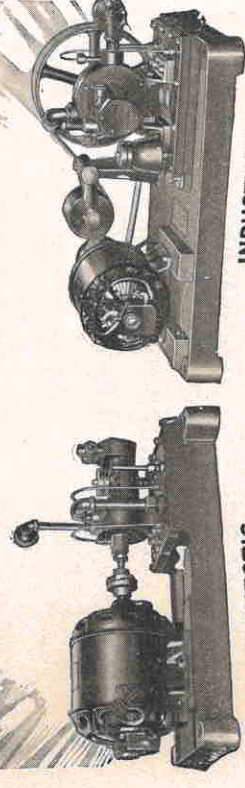
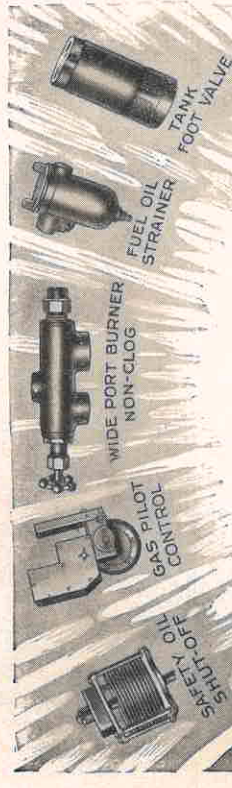
The most inexperienced person can operate it without instructions—the work cannot be spoiled.

Metal goods of every kind and description should be sand blasted to increase plating durability.

The sand blasting process makes a surface to which electro plate will adhere more securely and much more rapidly and so sand blasting saves time in plating, and improves your finish—very desirable ends you will agree. This also applies to articles to be painted, sprayed, enameled or otherwise treated. Mat finishes of various degrees are quickly secured.

STOP
GET QUICKER and BETTER HEAT

STOKING EXPENSE
ASH REMOVAL
DUST & DIRT



DOMESTIC

INDUSTRIAL

OIL BURNER OUTFITS LEIMAN BROS.

Makes all the Oils (light or heavy) Available
FOR

Saves in Money, Time and Labor

FUEL OIL HEATING

It's Desirable Heat — It's Concentrated Heat

Don't use light oils that will ignite without a mixture of air—heavy oils can't burn without air under pressure but that's what makes them safer than coal—and they contain much more heat—CHEAPER TOO.

LEIMAN BROS. OIL BURNING OUTFITS
are made especially for this work.

FOR DOMESTIC
AND
INDUSTRIAL
FURNACES

INSTALLATIONS
IN ALL SORTS
OF
BUILDINGS